>>> SEA SCIENCE AND SKILLS

# ARTIFICIAL INTELLIGENCE IN TELEDENTISTRY AS NEW ORAL HEALTH CARE TOOL AMONG MACEDONIAN DENTAL PROFESSIONALS – A QUESTIONNAIRE STUDY

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## OBJECTIVES:

THE RAPID AND EXTENSIVE DISSEMINATION OF THE COVID-19 SPARKED AN UNPRECEDENTED GLOBAL HEALTH CRISIS, LEADING TO A FUNDAMENTAL RESHAPING OF HEALTHCARE SYSTEMS ACROSS THE GLOBE. DUE TO THE INHERENT NEED FOR CLOSE INTERACTION WITH PATIENTS IN DENTISTRY, INTERVENTIONS HAVE BECOME ESPECIALLY VULNERABLE DURING THE PANDEMIC. HOWEVER, TELEDENTISTRY PRESENTS AN INNOVATIVE SOLUTION TO SAFELY RESUME DENTAL PRACTICE AMID THESE CHALLENGING TIMES. INCORPORATING AI INTO TELEDENTISTRY HAS THE POTENTIAL TO COMPLETELY TRANSFORM THE REMOTE DELIVERY OF DENTAL CARE, EDUCATION, RESEARCH, AND SUBSEQUENT INNOVATIONS.

## MATERIALS AND METHODS:



#### FOR THIS STUDY, A PRESTRUCTURED QUESTIONNAIRE WAS DEVELOPED AND DISSEMINATED AMONG 100 DENTAL PROFESSIONALS IN N. MACEDONIA THROUGH VARIOUS SOCIAL MEDIA PLATFORMS. THE DATA ANALYSES WERE BASED ON THE RESPONDENTS IN THE QUESTIONNAIRES AND WERE CALCULATED USING STATISTICAL SOFTWARE SPSS FOR WINDOWS VERSION 23.

#### RESULTS AND DISCUSSION:

OUT OF A TOTAL OF 96 COMPLETED FORMS RECEIVED, 88 (91.7%) RESPONDENTS WERE AWARE OF THE TERM "TELEDENTISTRY". ADDITIONALLY, 86 (89.6%) PARTICIPANTS BELIEVED THAT TELEDENTISTRY COULD SERVE AS AN EFFECTIVE EDUCATIONAL TOOL, WHILE 80 (83.3%) PARTICIPANTS EXPRESSED CONFIDENCE IN ITS ABILITY TO MONITOR THE ORAL HEALTH OF PATIENTS. HOWEVER, 68 (70.8%) PARTICIPANTS PERCEIVED TELEDENTISTRY AS CHALLENGING OR DIFFICULT TO IMPLEMENT ACROSS ALL BRANCHES OF DENTISTRY.

THE RAPID ADVANCEMENT OF DIGITAL HEALTH TECHNOLOGIES HOLDS SIGNIFICANT POTENTIAL TO ENHANCE THE PERFORMANCE OF HEALTH SYSTEMS AND PROMOTE POPULATION HEALTH. OUR PARTICIPANTS DEMONSTRATED A STRONG KNOWLEDGE AND AWARENESS OF TELEDENTISTRY AND EXPRESSED CONFIDENCE IN TELEDENTISTRY'S EFFECTIVENESS AS A TOOL FOR EDUCATING AND RAISING AWARENESS AMONG BOTH HEALTHCARE PROFESSIONALS AND PATIENTS.

Admission and nanagement programs	Diagonostic	Planning	Treatment	Follow-up
Collect, save, and protect patients information and history	Imaging system • Capture tooth radiograph (2d or CBCT)	CAD/Cam and RP Solutions • Design and manufacturi ng of different,	Efficient dental tools for oral procedures and treatments such as lased cutter , Robot dentist, and tele-dentist	Patients management and communicati on
	Analysis Programs •Al solutions- based detection	prosthetics using 3D printing or milling machines.		System evaluation

### CONCLUSION:

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AI in dentistry	
Role in variouis Field in dentistry	Applications in digital dentistry
Dental Public Health	3D Scanning / Radiograph
Endodontics	CAD/CAM
Oral and Maxillofacial Surgery	3D Printing
Orthodontics and Dentofacial Orthopedics	
Periodontics	
Oral and Maxillofacial Radiology	
Oral Medicine and Pathology	
Pediatric Dentistry	
Prosthodontics	